

## METHOD AND SYSTEM FOR UPSTREAM PRIORITY LOOKUP AT PHYSICAL INTERFACE

### ABSTRACT OF THE DISCLOSURE

A traffic prioritization system performs a coarse classification of upstream bursts at the physical interface of a headend communications device. The headend device monitors and controls communications with a plurality of remote communications devices throughout a widely distributed network, including the Internet. The traffic prioritization system includes a burst receiver that receives and sends the upstream bursts to a classifier. At an appropriate time, the classifier receives the upstream bursts and queries a priority lookup table (LUT) to determine a priority classification. The priority classification is used to separate the bursts into two or more priority levels. The higher priority level is used to designate services having a low tolerance for delay, such as telephony. Upon classification, the upstream bursts are forwarded to one of several priority queues. Each priority queue corresponds to at least one priority level. The headend device services each priority queue such that the higher priority queues are serviced before the lower priority queues.